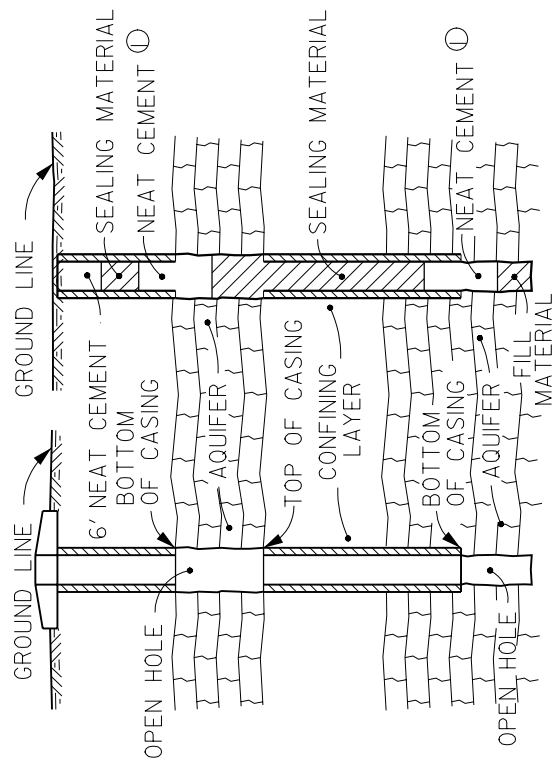
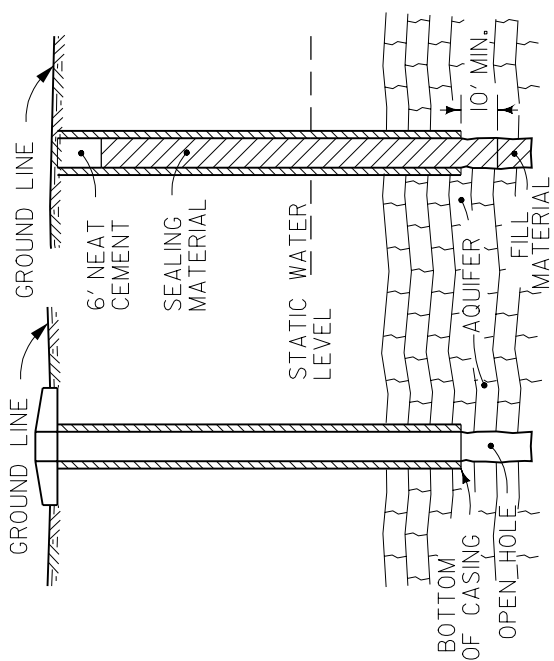


WELLS GREATER THAN 18" IN DIAMETER AND LESS THAN 100' DEEP IN SOIL

ARTESIAN WELLS



ONE PRODUCING AQUIFER CLASS 2 WELLS

MINIMUM THICKNESS OF 20 FEET. PLACE A MINIMUM OF 10 FEET ABOVE AND BELOW BOTTOM OF CASING.

WELLS LESS THAN 18 INCHES IN DIAMETER AND ALL WELLS IN BED ROCK

SEE GENERAL NOTES ON SHEET 2.

GENERAL NOTES:

ANY WELL NO LONGER IN USE SHALL BE SEALED. DETAILS SHOWN HEREON ARE INTENDED TO DEPICT THE VARIOUS STANDARD METHODS USED FOR SEALING WATER WELLS. ALL MATERIALS AND METHODS USED SHALL BE IN ACCORDANCE WITH IOWA CODE SECTION 567, CHAPTER 39, REQUIREMENTS FOR PLUGGING ABANDONED WELLS. WELLS SHALL BE SEALED BY A CERTIFIED WELL CONTRACTOR.

APPROVED SEALING MATERIALS ARE: 1) NEAT CEMENT (14 LBS. CEMENT PER 1 GALLON OF WATER); 2) GRADED BENTONITE, BENTONITE PELLETS OR BENTONITE GROUT; 3) SAND CEMENT GROUT (1 SACK OF CEMENT / EQUAL VOLUME MASONRY SAND / NOT MORE THAN 6 GALLONS WATER); 4) CONCRETE.

APPROVED FILL MATERIALS ARE: 1) SAND, 2) PEA GRAVEL, 3) CLASS A, B OR C GRANULAR SURFACING MATERIAL, 4) AGRICULTURE LIME. ALL MATERIALS SHALL BE FREE OF FOREIGN MATTER AND ANY TOXIC RESIDUE.

REGARDLESS OF THE MATERIAL USED IN THE PROCESS, THE SEALING (FILLING) MATERIAL SHOULD BE INTRODUCED AT THE BOTTOM OF THE WELL, OR AT THE INTERVAL TO BE SEALED (OR FILLED) AND PLACED PROGRESSIVELY UPWARD TO THE TOP OF THE WELL. ALL SEALING MATERIALS SHALL BE PLACED BY THE USE OF GROUT PIPE, TREMIE PIPE, CEMENT BUCKET OR DUMP BAILER, IN SUCH A WAY AS TO AVOID SEGREGATION OR DILUTION OF THE SEALING MATERIALS. BENTONITE PELLETS OR GRADED BENTONITE MAY BE ADDED AS SEALING MATERIAL BY POURING IN PLACE AND AGITATING TO AVOID BRIDGING.

RECOMMENDED PLUGGING PROCEDURES: THE ENTIRE WELL BORE MUST BE FILLED WITH ONE OR A COMBINATION OF THE ABOVE MATERIALS. ALL OBSTRUCTIONS MUST BE REMOVED FROM THE WELL. FOR ALL (DEEP) WELLS, NEAT CEMENT SHALL BE PLACED FROM 10 FEET BELOW THE BOTTOM OF THE CASING TO 10 FEET ABOVE THE BOTTOM OF THE CASING OR TO THE STATIC WATER LEVEL, WHICHEVER IS HIGHER. FOR WELLS COMPLETED IN MULTIPLE AQUIFERS, THIS SAME PROCEDURE SHALL BE RE-USED THROUGHOUT SUBSEQUENT AQUIFERS. THE UPPER PORTION OF THE WELL CASING SHALL BE CUT OFF AT LEAST 4 FEET BELOW GROUND OR CONSTRUCTION LEVEL. THE UPPER 6 FEET OF THE REMAINING CASING SHALL BE PLUGGED WITH NEAT CEMENT.

PRICE BID FOR "SEALING WELLS" SHALL BE CONSIDERED FULL COMPENSATION FOR FURNISHING ALL MATERIAL AND WORK NECESSARY TO COMPLETELY SEAL WELLS AS DETAILED HEREON AS WELL AS NOTED ON DETAIL PROJECT PLANS OR AS DIRECTED BY THE ENGINEER.

REV.	DATE	BY	DETAILS FOR SEALING WATER WELLS	FIGURE: 2010.4
DATE: 01-01-98				SHEET 2 OF 2